

Product datasheet for **RG237864**

Protein Kinase A regulatory subunit I alpha (PRKAR1A) (NM_001278433) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Protein Kinase A regulatory subunit I alpha (PRKAR1A) (NM_001278433) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PRKAR1A
Synonyms:	ACRDYS1; ADOHR; CAR; CNC; CNC1; PKR1; PPNAD1; PRKAR1; TSE1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG237864 representing NM_001278433. Blue=ORF Red=Cloning site Green=Tag(s)

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GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTACTATAGGGCGCCGGGAATTCGTCGACTG
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AAGTGCGTTAAGCTGGACCGACCTAGATTTGAACGTGTTCTTGGCCCATGCTCAGACATCCTCAAACGA
AACATCCAGCAGTACAACAGTTTTGTGCTACTGTCTGTC
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTAAAC
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Protein Sequence: >Peptide sequence encoded by RG237864
 Blue=ORF Red=Cloning site Green=Tag(s)

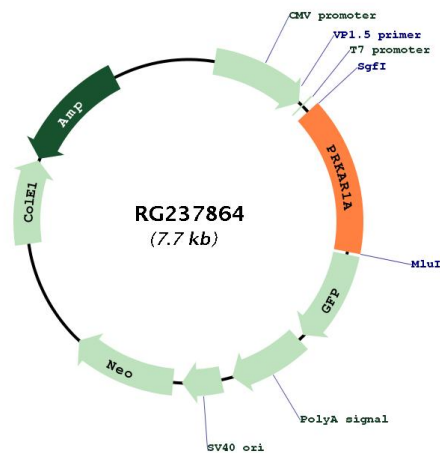
MESGSTAASEEARSLRECELVYQKHNIQALLKDSIVQLCTARPERPMAFLREYFERLEKEEAQIQNLQ
 KAGTRTDSREDEISPPPNPVVKGRRRRGAI SAEVYTEEDAASYVRKVI PKDYK TMAALAKAIEKNVLF
 SHLDDNERSDIFDAMF SVSFIAGETVIQQGDEGDNFYVIDQGETDVYVNNNEWATSVGEGGSFGELALIY
 GTPRAATVKAKTNVKLWGIDRDSYRRILMGSTLRKRKMYEEFLSKVSI LESLDKWERLTVADALEPVQF
 EDGQKIVVQGEPEDEFFIILEGSAAVLQRRSENEEFVEVGR LGP SDYFGEIALLMNR PRAATVVARGPL
 KCVKLD RPRFERVLGPCSDILKRNIQQYNSFVLSLV
 TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGEGTPEQGRMTNKMKSTKGALTFSPYLLSHV
 MGYGFYHFGTYP SGYENPFLHAINNGGYNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPED
 SVIFTDKIIRS NATVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVD SHMHFKSAIHPSILQNGGPMFA
 FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:	NM_001278433
ORF Size:	1143 bp
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
RefSeq:	NM_001278433.1 , NP_001265362.1
RefSeq Size:	4328 bp
RefSeq ORF:	1146 bp
Locus ID:	5573
UniProt ID:	P10644
Cytogenetics:	17q24.2
Protein Families:	Druggable Genome, Transcription Factors
Protein Pathways:	Apoptosis, Insulin signaling pathway
MW:	43 kDa
Gene Summary:	<p>cAMP is a signaling molecule important for a variety of cellular functions. cAMP exerts its effects by activating the cAMP-dependent protein kinase, which transduces the signal through phosphorylation of different target proteins. The inactive kinase holoenzyme is a tetramer composed of two regulatory and two catalytic subunits. cAMP causes the dissociation of the inactive holoenzyme into a dimer of regulatory subunits bound to four cAMP and two free monomeric catalytic subunits. Four different regulatory subunits and three catalytic subunits have been identified in humans. This gene encodes one of the regulatory subunits. This protein was found to be a tissue-specific extinguisher that down-regulates the expression of seven liver genes in hepatoma x fibroblast hybrids. Mutations in this gene cause Carney complex (CNC). This gene can fuse to the RET protooncogene by gene rearrangement and form the thyroid tumor-specific chimeric oncogene known as PTC2. A nonconventional nuclear localization sequence (NLS) has been found for this protein which suggests a role in DNA replication via the protein serving as a nuclear transport protein for the second subunit of the Replication Factor C (RFC40). Several alternatively spliced transcript variants encoding two different isoforms have been observed. [provided by RefSeq, Jan 2013]</p>